

## Theories of Child Development

### GUIDING QUESTIONS

1. What is a theory, and how can it be useful in working with young children and their families?
2. What are the key tenets of maturationist theory, and what are their implications for working with young children?
3. What are the major criticisms of maturationist theory from a multicultural perspective?
4. What are the key principles of behaviorist theory, and how are they applied in the classroom?
5. What are the key professional and multicultural criticisms of behaviorist theory?
6. What are the fundamental tenets of psychoanalytic theory, and how can these be useful in working with young children?
7. What are the major professional, multicultural, and feminist criticisms of psychoanalytic theory?
8. What are the key principles of the cognitive-developmental theory, and what are their implications for teaching?
9. What are the major criticisms of cognitive-developmental theory raised by researchers and multicultural scholars?
10. What are the main ideas underlying sociocultural theory, and how do they guide classroom practice?
11. What are researchers' and multicultural scholars' criticisms of sociocultural theory?
12. What are the primary beliefs of information processing theorists, and how can these be applied in the classroom?
13. What concerns have been raised about the information processing theory, and how adequate is it in explaining learning in different cultures?
14. What are the major tenets of the ecological systems theory, and how do these influence advocacy and public policy?
15. In what ways does the ecological systems theory more fully address cultural diversity and development than other theories?

Researchers and educators hold several distinct sets of beliefs, or theories, about how children grow and develop. One theory holds that children simply mature as they grow older. Another is that the environment shapes what children become. In some theories, genetics and environment are believed to interact to influence learning and behavior. In this chapter, we will review seven theories of child development. The major tenets of each theory will be demonstrated by applying them to the following real-life classroom dilemma:

Four-year-old Adam moves into the block area of his Head Start classroom, where two other children have built a make-believe car out of large blocks. As he enters, one of the two children announces loudly, "Adam can't play!" Adam ignores this statement and sits down on the pretend car beside his two peers. He snatches a plastic firefighter's hat from the head of the child who has just called out. The child protests loudly,



"No, Adam! Give it back!" Adam pushes him off the car with great force. His victim begins to cry and call for a teacher's assistance.

The teacher, Ms. Rodriguez, moves into the area quickly. She is very familiar with the problem she now faces; Adam has been hitting, kicking, and pushing other children since he began the Head Start program 3 months ago. Adam's aggression seems to have increased lately. Talks with Adam's mother have not helped. She is very concerned about his classroom behavior but is having great difficulty coping with the problem. As an unemployed single parent, she is struggling to make ends meet. She has suffered from depression and is receiving mental health services. She is 20 years old and has three other children.

Ms. Rodriguez now stands before Adam and the child he has just assaulted. She must make an on-the-spot decision about how to respond. What specific steps should she take? What should she say to Adam? To his victim? What long-term strategies should she adopt to help Adam learn less aggressive ways of interacting with peers?

How this teacher responds will depend, in part, on what she believes about why Adam behaves as he does. If she believes that he has learned aggressive behaviors from watching violent models in the neighborhood or on television, she will select one kind of intervention. If she believes that he has severe underlying emotional challenges that must be addressed, she will attempt a different strategy. If she believes that he lacks knowledge about how to interact positively with others, she will consider a third approach. Perhaps she perceives that some combination of these conditions is at the root of Adam's difficulties, in which case she will side on yet another intervention. In other words, the teacher's decision about how to deal with Adam's aggression will depend on her theory about his development.

A **theory** is a system of beliefs about something. A child development theory is an integrated collection of beliefs about why children behave, think, and feel as they do. A theory might include beliefs about the nature of learning and development, the role of heredity and environment, and how adults, other children, schools, and communities contribute to the development process. Adam's teacher will base her decisions about Adam on a complex system of beliefs pertaining to these issues.

**theory:** A system of beliefs about something. A child development theory is a collection of beliefs about why children behave, think, and feel as they do.

**TABLE 3-1**  
**Theories of Child**  
**Development**

Theory	Prominent Theorists	Assumptions About Child Development
Maturationist theory	Gesell	Human traits are determined primarily by genetics. Children simply mature with age; environment plays a minor role.
Behaviorist theory	Skinner, Watson, Bandura	Human traits are acquired through experiences within the environment. Adults can purposefully shape desired learning and behavior through positive reinforcement.
Psychoanalytic theory	Freud, Erikson	Emotional development stems from an ability to resolve key conflicts between desires and impulses and pressures from the outside world. Adults can promote children's emotional health by providing appropriate opportunities for the gratification of drives.
Cognitive-developmental theory	Piaget	Intellectual development is internal and personal. Knowledge is constructed actively by learners, who struggle to make sense out of experience. Learners assimilate new ideas into what they already know but also adjust previous thinking to accommodate new information.
Sociocultural theory	Vygotsky	Adults and peers can "scaffold" children's learning by asking questions or challenging thinking. Through social interaction and verbalization, children construct knowledge of the world.
Information processing theory	Siegler, Dodge	Knowledge is acquired by applying specific thinking processes in order to pay attention to, store, remember, retrieve, and modify information over time. Children learn in social situations by noticing social cues, storing these in memory, and retrieving and applying them in subsequent interactions with others.
Ecological systems theory	Bronfenbrenner	Development is influenced by the personal, social, and political systems within which children live. Interactions among the family, school, community, social and political system, and the individual child will determine developmental outcomes.

Several prominent, contrasting theories about child development are presented in Table 3-1. Each is based on research and a set of assumptions about the nature of human experience. No single, universally accepted theory exists. Researchers and practicing teachers may hold one perspective or another, or they may hold an eclectic view that attempts to blend the beliefs of several distinct viewpoints. Some theories are interrelated and complementary; others offer conflicting perspectives on childhood.

Theories about children are extremely practical. It is a myth that a theory is abstract and esoteric and holds little value in the real world. A theory can guide professional practice

by ensuring that there is an underlying purpose for classroom routines and that the process of educating young children is carried out consistently. It can help a teacher solve a problem like Adam's. Very specific and useful strategies can be derived from each major theoretical perspective.

## MATURATIONIST THEORY

The **maturationist theory**, one of the oldest theories of development, holds that children learn and behave as they do because they have inborn predispositions to do so. From this perspective, most of what we become as humans is genetically predetermined. Some children are talented in the arts, for example, because of inherited, genetically derived traits. Some are aggressive because of inborn temperament. From this view, all children, regardless of background or culture, acquire the same basic abilities and knowledge—how to walk, talk, and read, for example—at about the same age and in a relatively fixed order because these skills emerge in a way that is predetermined at birth.

This theoretical perspective assigns relatively little importance to the child's environment (Gesell, 1933). For example, to the maturationist, parenting and teaching are far less important than genetics. Social class and culture are not particularly emphasized. In its purest form, this theory suggests that children simply mature as they get older; they will turn out as they will, with little influence from the outside world.

A metaphor used by maturationists is that of a growing plant. Children's development is seen to be like the blossoming of a flower or the growth of a seed. Given the basic nutrients of life—loving care, safety, and a healthy diet—children will grow and flourish in a predetermined way just as a plant does. Major environmental obstacles may slow the path of growth, like a plant not receiving enough sun or water, but once essential needs are restored, the child will continue to flourish.

Early maturationists (Gesell, 1933; G. S. Hall, 1893) sought to describe how social, physical, intellectual, and personality characteristics unfold as children mature. The focus was on providing a profile of *normal* maturation. Gesell conducted controlled observations of thousands of children in order to identify **developmental milestones**—that is, specific characteristics that could be expected to emerge in children at various age levels (Gesell & Ilg, 1949). His work was made available to parents who used his developmental time schedules to assess their own children's growth. So, his research served to relieve anxiety in some parents and intensify it in others.

According to Gesell and his colleagues, major developmental and behavioral problems stem from an environment that restricts maturation (Ilg & Ames, 1965). Children who are placed in rigidly academic classrooms or are expected to perform difficult tasks before they are ready also are likely to exhibit problematic behaviors.

Modern maturationists have focused more directly on how genetics contributes to development (Plomin, 1995; Scarr, 1993). Although the research methods of these scientists vary, their assumptions about child development are generally the same: genetics and maturation have a more powerful effect on behavior and learning than the environment. These authors provide evidence that at least some developmental characteristics, particularly physical ones, emerge in a fixed order at about the same age. A classic study by W. Dennis and M. G. Dennis (1940) of Hopi Indian children learning to walk is a good example. These researchers found that infants who were strapped to cradle boards—rigid boards that held children upright and greatly restricted their movement—learned to walk at the same time as infants whose parents had given up this old custom.

Gesell himself conducted an experiment in which one infant twin was taught to climb up and down stairs and the other twin was not. The trained infant showed advanced

**maturationist theory:** A theory that holds that most of what humans become is predetermined by genetics and that traits inherited from ancestors simply unfold as children mature.

**developmental milestones:** Specific characteristics that are expected to emerge in children at various age levels.

stair-climbing ability for only a short time; the untrained twin quickly caught up when given experience with stairs (Gesell & Thompson, 1929).

Other studies of twins also lend credence to a maturationist view. Identical twins raised apart have been found to show surprisingly similar characteristics in many different areas of development, including activity level, sociability, attention span, impulsivity, introversion/extroversion, and propensity to mental health problems such as schizophrenia (Goldsmith et al., 2007; Plomin, 2008). Other research has shown that personality traits such as boldness or timidity can be identified in infancy and that these persist into adulthood (Kagan, 1994; Moffitt et al., 2007). One well-known longitudinal study showed that infant personality types—"easy," "difficult," and "slow to warm up"—could still be observed in adult subjects (A. Thomas & Chess, 1977). Of special interest to parents and teachers are studies showing that the characteristics of a **difficult temperament** in infancy—harsh and negative reactions to new or frustrating situations, irregular patterns of sleeping or eating, and numerous adjustment problems—continue in later childhood and adolescence (Pesonen et al., 2003). From a maturationist perspective, these traits are genetically determined and will unfold regardless of environmental intervention.

### Working with Adam

How would maturationists explain Adam's aggressive behaviors? What strategies would they recommend to address the problem? This theoretical perspective suggests two overall causes of Adam's difficulty. First, Adam could be acting the way he is simply because he is immature. From this perspective, positive social behaviors unfold over time with maturation, so less mature children are not able to interact effectively with peers. It is possible that Adam is not developmentally ready for participation in such a large Head Start group. One very controversial strategy that is often suggested by maturationists is to postpone Adam's enrollment in a preschool setting until he is more mature. In a year's time, he may gain social abilities that will allow him to function more positively. This strategy often has been called *buy a year*.

Another maturationist explanation for Adam's behavior is that he may have been born with a difficult temperament. If Adam's challenging interactions are displayed across all play settings or times of day and if he seems truly unable to gain control of these negative behaviors, he may have inherited a personality that is difficult. How can teachers and caregivers respond if Adam's problems are purely genetic? It is recommended that classroom and home environments be restructured to accommodate these personality traits. Because children like Adam may have difficulty with transitions and new situations, these should be carefully planned and minimized. Establishing a regular, predictable routine; maintaining constancy in the physical play space; and making other efforts to create a sameness in Adam's experiences will be helpful from this viewpoint. Because children with difficult temperaments often react severely to being held or restrained, great effort should be made to avoid these behaviors in interactions.

Adults should also practice tolerance and acceptance from a maturationist view. Teachers might ignore the little things in Adam's classroom behavior and tolerate minor oppositional behaviors without reaction. Challenging interactions are viewed simply as part of Adam's personality. The following vignette shows the maturationist theory in practice:

**Difficult temperament:** A disposition that is characterized by harsh and negative reactions to new or frustrating situations, irregular patterns of sleeping or eating, and numerous adjustment problems.

Adam has just entered the art area where a group of children are cutting with scissors. All the available scissors are being used. He tries to snatch a pair away from Samantha, a child who is working there. A teacher witnesses the incident from a distance.

ADAM: (Pulling on the scissors) Give me these!  
 SAMANTHA: (Clinging to the scissors) Adam! No! (Looks to the teacher for help)  
 TEACHER: (In a calm voice) Adam, Samantha is using those scissors.  
 ADAM: (Still pulling on the scissors, says to Samantha in a threatening voice) You better give me those!

TEACHER: (Retrieves another pair of scissors from a cupboard) Here's another pair. Why don't you use these? I'll sit with you, and you can tell me about what you're working on. (Gently guides Adam to his own seat and sits next to him)

In this interchange, the teacher shows understanding and tolerance for Adam's severe outburst. Rather than using harsh or punitive methods, he has calmly resolved the dilemma by redirecting Adam's activity. With maturation, Adam may eventually be able to regulate his own social behaviors.

### *Critique and Multicultural Analysis*

Many studies do not support a pure maturationist perspective. Even Gesell (1933) found that environment plays an important role. Research on twins has shown that a significant portion of behavior and development can be explained by life experience. For example, follow-up studies on temperament show that personality can change over time as a result of environmental factors (Kagan et al., 1994). Research on IQ shows that there exists a **heritability ratio**—a mathematical estimate of the role of genetics in determining intelligence. By most researchers' estimates, more than half of "innate" intelligence can be explained by environment (Davis, Arden, & Plomin, 2008).

In addition to the challenges to maturationism presented by research, a growing number of professionals are raising concerns about the educational and political implications of such a theory (Boykin, 1994; Derman-Sparks, Phillips, & Hilliard, 1997). Concern has been expressed that a maturationist perspective could lead some parents and professionals to give up on children like Adam, reasoning that if challenges are predetermined, it is fruitless to intervene. If problems are to be solved by pure maturation, then a wait-and-see approach would be taken for even the most severe problems of child development. Some have suggested that the "buy a year" strategy might better be phrased "lose a year" since opportunities to address the child's difficulties would be lost (Shepard, 1994; Stipek & Byler, 2001). Detractors of maturationist theory contend that, although its messages of tolerance and acceptance of differences are valuable, care should be taken not to assign too great a role to genetics. Doing so could lead to a pattern of inaction in the home and classroom when children are in need of support.

The staunchest opponents of maturationism argue that it leads to cultural bias (Dei, Mazzuca, McLissa, & Ogbu, 1997; Padilla et al., 1991). These authors point with alarm to the early work of Arthur Jensen, a prominent educational psychologist who created a furor with an article titled "How Much Can We Boost IQ and Scholastic Achievement?" In the article, Jensen (1969) implies that African American children have lower IQs than Euro-American children because of genetically derived intellectual deficiencies. He proposes that educational programs for these lower-IQ students be focused on simplistic thinking processes and that they be guided toward professions that do not require abstract reasoning or problem solving. The dangers of a maturationist theory are obvious from Jensen's work: the argument of genetic determinism can be used, as it has been for centuries, to advance a belief that some races are inferior.

Ogbu (1994) argues that racial differences in children's behavior and learning are just that—differences, not genetic deficits. These differences stem from the unique experiences, histories, and worldviews of particular cultures. Cultural variations—diverse languages and dialects, learning styles, or patterns of interaction, for example—are derived from social experience. Such variations should be understood and appreciated, not remediated.

True deficits in competence do exist among individuals of all cultures. These also can be traced to life experiences, such as oppression, poverty, poor health care, or inadequate schools. These factors can be successfully ameliorated through intervention. From Ogbu's perspective, environment, including culture, is the most critical element in child development.

**heritability ratio:** A mathematical estimate of the relative role of genetics in determining intelligence.

## BEHAVIORIST THEORY

The **behaviorist theory** offers a very different perspective on child development. Behaviorists contend that most of what children are and will become is derived from experience. At birth, from this view, a child's mind is a "blank slate" or an "empty vessel" to be gradually filled by the environment. Development in all areas—from personality type to ability to read to career preference—is a result of environmental influence.

Behaviorist theory assigns great importance to the role of adults and holds that parents and teachers must purposefully shape children's learning. Although most behaviorists believe that children are born with certain rudimentary facilities—for example, a fundamental ability to learn and a nervous system that allows perceptual and motor growth—they argue that maturation and genetics are relatively unimportant in human development. One of the first behaviorists in America, John B. Watson, summarized this theoretical perspective in its purest form when he described the newborn baby as merely "a lively bit of squirming flesh, capable of making few simple responses" (1929, p. 47).

A critical tenet of behaviorist theory—and one from which the theory's name originated—is that all learning is really just observable behavior. From this perspective, even such complex tasks as reading, talking, or solving a calculus problem are behaviors that can be observed and measured. Reading, for example, may be viewed as the behavior of saying aloud or to oneself the sounds and words represented on a printed page. From a behaviorist view, advancement in any area of learning is simply a change in behavior. Becoming a more competent reader, for example, is the process of being able to say new sounds, bigger words, or longer sentences as they appear on the page. The job of the teacher or parent is to present new skills in small and logically sequenced units and then to shape children's acquisition of these in special ways.

### *Classical and Operant Conditioning*

Watson was the first to apply one form of behaviorism, **classical conditioning**, to children's learning. In classical conditioning, adults shape children's behavior by pairing a neutral event (e.g., riding in a car on a long trip) with something that is naturally either pleasurable or unpleasurable (e.g., eating cookies). Over time, children begin to respond to the neutral stimulus in the same way they would the pleasurable one even when the pleasurable stimulus is not present (e.g., a child would feel content and happy riding in a car even when not provided with cookies).

Watson's now famous experiment with an 11-month-old child, Albert, further illustrates this method. At the beginning of the experiment, Albert had shown no fear of rats. During the conditioning period, he was presented with a rat and, at the same moment, a startling noise. This created great upset. (This experiment was conducted before the American Psychological Association had written modern rules of research ethics.) Over time, Albert became afraid of rats because he learned to associate their presence with the loud noise. Even when the noise was no longer made, he cried when rats (and later other furry objects) were presented to him. He had learned a conditioned response, albeit a useless and perhaps troublesome one: to cry in the presence of rats and similar stimuli. This proved, according to Watson, that through environmental conditioning a child could be shaped, behavior by behavior, to become almost any type of person (Watson, 1929).

A more modern application of behaviorism has been provided by B. F. Skinner (1948), who developed a system of **operant conditioning** based on the work of Watson and others. In operant conditioning, children's desirable behaviors are rewarded systematically by adults. When this occurs, they are more likely to perform those behaviors. Children who are

**behaviorist theory:** A theory that holds that most of what humans become is shaped by the environment.

**classical conditioning:** A strategy for shaping behavior in which a neutral stimulus is paired with a pleasurable one. Eventually, the subject responds in the same way to the neutral stimulus as to the pleasurable one, even when the pleasurable stimulus is no longer present.

**operant conditioning:** A form of training in which a desired behavior is immediately rewarded. When this occurs, that behavior is performed more frequently.

rewarded for using the toilet independently, for example, will do so more often. If parents wish their children to sit quietly at the dinner table, they should reward them for this behavior after it occurs.

A principle of operant conditioning is that the behavior of children and adolescents can be shaped only gradually. When a toddler is just starting to use the toilet, for example, rewards should be given for small steps—say, just trying to get to the bathroom on time. Breaking down learning into manageable units and rewarding small steps forward are key features of operant conditioning.

Skinner (1948) wrote at length about the kinds of responses adults should give for positive behavior. Reinforcers such as verbal praise and tangible rewards (i.e., snacks, toys, stickers, special privileges) should be given only after positive behaviors have been performed. Punishment should not be used; undesirable behavior should simply be ignored. A good deal of patience is required, then, in carrying out Skinnerian parenting or teaching!

### *Social Learning Theory*

If reinforcement should not be provided until after desirable behaviors are performed, how do teachers or parents induce children to act in positive ways to begin with? An adult could wait a long time for a child to share a toy, speak a new word, or say “thank you” to a parent by mere accident. Albert Bandura (1991) formulated a theory to take this problem into account—**social learning theory**. Following his theory, desirable behaviors are modeled by adults. Children imitate these. If they are rewarded for doing so, they will perform these behaviors more frequently.

Bandura’s theory is based on the assumption that humans acquire new behaviors merely by observing others perform them. For example, children will learn to share by watching others do so. They will learn how books work by observing parents or teachers reading them. Bandura’s work lends support to the adage “Children are more likely to do what we do than what we tell them to do.”

Bandura (1965) argues that children and adolescents are most apt to learn behaviors they observe if they see these being reinforced. In his classic social learning study, he found that children were more likely to behave aggressively if they watched a model punch a doll and then receive rewards for this. Much positive social behavior, Bandura contends, is learned by witnessing others perform positive acts and then seeing them praised or rewarded. A practical application of Bandura’s work is that a teacher or parent can help one child interact positively by openly praising another who is behaving appropriately.

### *Working with Adam*

From the perspective of Skinner or Bandura, Adam’s problems are behavioral, as are all aspects of child development. So, strategies need to be implemented to change Adam’s social interactions in the classroom to induce him to perform kind or cooperative behaviors. A systematic reward system should be established in which Adam’s positive social behaviors—no matter how fleeting—are reinforced with stickers, special privileges, or snacks. Later, the teacher might move to social reinforcers, such as praise. Such strategies have often been called “catching children being good” since prosocial behaviors in a child like Adam may be very infrequent. While implementing these strategies, misbehavior should be ignored. This will ensure that Adam is not inadvertently rewarded for his aggression by adult attention. If Adam’s behavior becomes too disruptive or dangerous, a time-out might be given in which Adam would be asked to sit away from the group. Skinner argues that a time-out is not a punishment. (However, many practicing teachers who have witnessed children’s negative emotional responses to this practice disagree.)

**social learning theory:** A theory that holds that humans learn new behaviors by imitating the people around them. When they are rewarded for this imitation, they will perform these behaviors more frequently.

Behaviorists believe that adults should praise desirable behavior while ignoring disruptive or antisocial behavior.



Behaviorists would also suggest that positive models of prosocial behavior be provided. Teachers or parents might go out of their way to model kindness and cooperation themselves and to avoid harsh responses such as shouting or physical punishment. In addition, adults could purposefully praise the positive interactions of Adam's peers in his presence. This would show that such behaviors are rewarded. The following vignette illustrates behaviorist theory in practice:

Two children are playing cooperatively in the sandbox on the playground. Adam moves in, shouting and snatching sand toys away from them. His peers initially ignore him and keep playing. A teacher quickly intervenes.

TEACHER: (Speaking to the two children who are playing cooperatively) Samantha and Stuart, I like how nicely you are playing together. You are sharing your toys and being kind to each other.

SAMANTHA: (In a proud tone) Yeah. We're nice friends.

TEACHER: Yes. (Presenting several new digging toys) Would you like to play with these?

ADAM: (Shouting at his peers) You can't play with those. You get out of here!

TEACHER: (Ignores Adam's outburst and continues to talk to the two other children) Maybe I'll play with you. (Sits down and begins to work in the sand with the two children)

ADAM: (Throws a handful of sand out of the sandbox and screams) I'm going to get all this sand out of here! (Now throws a bucket out of the sandbox)

TEACHER: (Ignores Adam, speaks to the two others) What are you working on here, a castle?

STUART: Yeah. It's a castle for... pirates, I think.

ADAM: (Watches a moment, then speaks in a quieter tone) I'll help pile the sand. (Scoops sand into a bucket and offers it to his peers) Here. You put this on.

TEACHER: Adam, great! You're helping us out. (Hands a digging toy to him) Would you like to use this to help us with our castle?

In this situation, a teacher has ignored Adam's misbehavior and, in his presence, rewarded two children who are cooperating. She patiently ignores Adam's undesirable behaviors. Adam finally displays positive social interaction. The teacher then quickly praises and rewards these prosocial acts.

### *Critique and Multicultural Analysis*

Behaviorism has come under criticism in recent years (Crain, 2005; Overton & Ennis, 2006). A major concern has been that modeling and reinforcement do not fully explain learning. The case of language development illustrates this clearly. The behaviorist view is that language learning is shaped through reinforcement—that is, when very young children imitate adult utterances, they are praised or rewarded (Skinner, 1957). Research suggests that this is simply not how language is acquired (Hollich, Hirsh-Pasek, & Golinkoff, 2000; K. Nelson, 1998). Children invent their own unique utterances when they learn to talk. For example, children might first use the correct form of “took” and then, out of the clear blue, use their own version: “taked” or even “takeded.” Is it likely that this new, incorrect form was imitated from an adult model? Would adults systematically praise this misstatement? Another example is the child's invention of new words. Could the child who refers to a bald adult as having a “barefoot head” possibly have heard this from an adult model?

In fact, classic parenting studies show that adults do not praise the correctness of children's language (R. E. Owens, 1994). For example, if a child were to declare “I pushed Sarah,” it is unlikely that an adult would respond with, “I like the way you used the past tense form correctly.” Instead, adults usually reply to the content of children's utterances.

Children and adolescents demonstrate countless novel behaviors and learning in other areas that cannot be explained by an imitation and reinforcement theory. Why do very young children believe that a cow is a “doggie”? Why will they argue that 10 cookies spread out in a long line are more than 10 cookies that are bunched together on a plate? Can these ideas possibly be observed in or reinforced by adults? How can a group of 9-year-old friends invent a secret language, complete with its own words, sounds, and special symbols, that they write on their notebooks at school? Could they have imitated this language from others? Would a teacher have somehow reinforced this in the classroom? (Likely, just the opposite is true.) Most researchers now believe that learning is more complex than merely copying the behavior of others (R. M. Thomas, 2004). Development is internal and personal; more often, it involves the mental action of children rather than any external behavior by adults.

Multicultural critiques of behaviorism abound. Serious questions have been raised about the practice of excessively praising or rewarding children's behavior (Corpus & Lepper, 2007; Hitz & Driscoll, 1988; Kohn, 2001), particularly in children of historically underrepresented groups (Garcia Coll, Meyer, & Brillon, 1995; Maynard, 2002). Some families or cultural groups virtually never use positive reinforcement, yet their children grow and learn. Stars, stickers, and verbal praise do not appear, then, to be a necessary ingredient for positive development. Children whose family experiences do not include constant praise may be overwhelmed, in fact, by teachers who rely on tangible rewards or lavish accolades. In some Asian and Native American families, for example, where modesty is valued, praise can even create discomfort and embarrassment (Klein & Chen, 2001). Research suggests that for children of all cultures, praise can actually inhibit learning, creativity, and even self-esteem (Hitz & Driscoll, 1988; Kohn, 2001).

A number of other questions about behaviorism have been raised by multicultural scholars: Which behaviors should be reinforced (Boykin, 1994)? Who should decide this? On whose values, histories, and worldviews should these decisions be based? Can and should all children's behavior be shaped to conform to standards of mainstream America? Boykin and

Toms (1985) have argued that tenets of behaviorism have been used “to promote Anglo-Saxon ideals” (p. 35). Problems arise, they suggest, when adults reward behaviors that are not valued by a child’s cultural group. Worse yet, some behaviors that are reinforced in school may be in conflict with the values of one’s own family.

For example, in one commonly used primary school curriculum, children are rewarded for establishing eye contact and taking turns talking in a group. These are not behaviors that are valued or appreciated in all cultures. In some Mexican American, African American, and Korean families, eye contact is a sign of disrespect, and quietness is highly valued (Chan, 1998). In some Latino families, talking all at once in a group—thus helping one another get a right answer in class—is a sign of being considerate (Rothstein, Trumbull, Daley, & Isaacs, 2001). Yet just the opposite is what is reinforced in American schools. Behaviorism, then, can lead to “mixed socialization messages” (Boykin & Toms, 1985, p. 36) that create conflict and confusion for children of historically underrepresented groups.

Educational programs designed around behaviorist principles do not always have a good track record in meeting socialization or learning goals, particularly for children of low socioeconomic status or those from traditionally underrepresented groups. A number of longitudinal studies have found, for example, that African American children—particularly boys—fare less well in behaviorist classrooms (Burts, Schmidt, Durham, Charlesworth, & Hart, 2007; Hart, Burts, & Charlesworth, 1997; Marcon, 2002; Schweinhart & Weikart, 2006).

## PSYCHOANALYTIC THEORY

**psychoanalytic theory:** A theory that holds that emotional development is influenced by tensions between internal desires and impulses and the demands of the outside world. The resolution of these tensions is needed to become a healthy adult.

**id:** Freud’s term for the part of the mind that contains instinctual urges and strives for immediate gratification but is kept in check by the ego and the superego.

**ego:** Freud’s term for the part of the mind that is rational and regulates and directs the instinctual impulses of the id.

**superego:** Freud’s term for the part of the mind that comprises the conscience, including the values and mores of one’s culture.

The **psychoanalytic theory** varies from other child development perspectives in that it focuses exclusively on the formation of personality. Psychoanalysts contend that children’s emotional health stems from an ability to resolve key conflicts between their internal desires and impulses and pressures from the outside world. For example, infants feel an urgent need for pleasurable oral stimulation and experience great tension until this desire is satisfied. However, in the real world, babies cannot nurse all the time, so they must control their urges to some degree until an appropriate opportunity presents itself. In adolescence, strong sexual urges arise. Emotionally healthy youth are able to regulate these feelings and to find socially approved outlets for sexual tension. Those who cannot do this may be at risk; they may engage in early and unsafe sexual activity, for example.

From a psychoanalytic perspective, a healthy child is one who learns to walk a fine line between immediate need fulfillment and the control of urges. Parents and teachers play a critical role in the process. They must provide just the right amount of freedom and nurturance. If they allow too little or too much gratification, according to the psychoanalytic theory, the child or adolescent may fail to mature emotionally.

The best-known psychoanalytic theorist was Sigmund Freud (1938), a physician who formulated a perspective of personality development based on his observations of neurotic adult patients. He postulated that instinctual urges—such as the need for oral pleasure—are located in the **id**, a significant part of the mind. According to Freud, the id creates a constant pressure to satisfy basic drives, many of which derive from sexual feelings. If the id were the only aspect of personality, humans would seek to gratify their needs without delay. However, the ego emerges in early infancy to keep the id in check. The ego, another fundamental component of the mind according to Freud, is more rational and regulates and redirects the instinctual impulses of the id so that need fulfillment is sought only at appropriate times. At the end of early childhood, the **superego** appears within the personality. This component of the mind comprises the conscience; all the values and mores of one’s culture are included.

This is how these three systems of the mind interact, according to Freud: A 5-year-old has an urge to obtain a toy that another child is using. The id drives her to snatch the toy

and run off. The ego redirects her, however, to delay this behavior because the moment is not right; the child using the toy is older (and bigger) and might resist. In addition, a teacher hovers nearby. At the same time, the superego informs the child of important societal rules. The superego reminds her that being a “good girl” means sharing and taking turns, so the child refrains from taking any action at all.

### *Erikson's Ages of Emotional Development*

Erik Erikson (1963, 1982), another psychoanalyst, elaborated on and extended Freud's theory. He proposed eight ages through which humans must pass from birth to adulthood if they are to feel competent and self-fulfilled. They are presented in Table 3-2.

Like Freud, Erikson proposed that healthy personality growth is characterized by a resolution of inner conflicts. Each stage of emotional development, from Erikson's view, involves a struggle between two opposing emotional states—one positive, the other negative (see Table 3-2). These polar states push and pull at the individual, creating tension and posing unique interpersonal problems. For Erikson, the individual's primary psychological work at a particular stage is to resolve this emotional conflict in a positive direction. The role of teachers and parents in this process is to help children pursue the positive emotional states that are critical to each stage of development.

As shown in Table 3-2, the first four of Erikson's stages involve emotional conflicts that confront children. The earliest conflict—between trust and mistrust—occurs in infancy. Emotionally healthy babies, according to Erikson, acquire **trust**—a sense that they have nurturing, responsive caregivers who meet their basic needs. They come to view the world as safe and predictable. They enter into trusting relationships, first with primary caregivers and later with other human beings. *Security* is another word that describes this emotional state. Although humans will always experience feelings of mistrust about their relationships or the security of the world, from Erikson's view, the emotionally healthy baby is essentially trusting of the world and the people in it. Children who are abused or neglected, whose caregivers do not respond to their needs, or who for other reasons come to doubt the trustworthiness of the world will not resolve this emotional conflict in a positive way. They may be impaired from entering into relationships with others and may be unable to advance to later stages of emotional development.

The second of Erikson's conflicts—between autonomy and shame and doubt—occurs during the toddler years. Once children trust adults and know that their basic needs will be met, they are willing to venture out away from the safety of parents and family. They now wish to become individuals apart from those with whom they have bonded. In striving for individuality, children often assert themselves, rebel against rules, and assume a negative affect when confronted with adult control. Erikson argues that the emotionally healthy toddler gradually acquires a sense of **autonomy**—a feeling of individuality and uniqueness apart from his or her parents. Children who are overly restricted or harshly punished for attempts at becoming individuals will come to doubt their individuality and suffer shame. Gradually, such children can become timid, lack confidence in their abilities, and assume identities as mere extensions of their parents.

Erikson contends that children who develop a strong sense of autonomy as toddlers will acquire a sense of **initiative** in their preschool years. This emotional state includes a desire to take action and assert oneself. Children with initiative wish to create, to invent, to pretend, to take risks, and to engage in lively and imaginative activities with peers. If adults encourage these efforts, a sense of initiative will flourish. However, when adults criticize children or in other ways lead them to believe their efforts are wrong, feelings of guilt arise. Moderate feelings of guilt can play a positive role in development, of course. They can lead children to assume responsibility for their own behaviors, for example. Overwhelming guilt, however, inhibits emotional growth.

**trust:** Erikson's term for an emotional state, often acquired in infancy, in which children feel secure and know that basic needs will be met by caregivers. Such experiences as child abuse or neglect will lead infants to an opposite state—*mistrust* of the world and the people in it.

**autonomy:** Erikson's term for an emotional state, often acquired in toddlerhood, in which children strive to be independent and separate from parents. Children who are overly restricted will feel *shame and doubt*.

**initiative:** Erikson's term for an emotional state, often acquired in the preschool years, in which children assert themselves, make creative attempts, take risks, and reach out to peers. Children whose initiatives are thwarted will experience an opposite emotional state: *guilt*.

TABLE 3-2  
Erikson's Eight  
Ages of Emotional  
Development

Stage	Approximate Age	Description
Trust vs. mistrust	Birth to 18 months	Children must come to trust that basic needs will be met by caregivers and that the world is a predictable and safe place. Otherwise, they will develop feelings of mistrust in others and the world.
Autonomy vs. shame/doubt	18 months to 3.5 years	Children must acquire a sense of independence from parents and a belief that they can do things on their own. If children are overly restricted when asserting their independence, they will develop feelings of shame and doubts about their individuality.
Initiative vs. guilt	3.5 to 6 years	Children must feel free to act, to create, to express themselves creatively, and to take risks. Children who are inhibited in these pursuits can become overwhelmed with guilt.
Industry vs. inferiority	6 to 12 years	Children must come to feel competent in skills valued by society. They need to feel successful in relation to peers and in the eyes of significant adults. If they experience failure too often, they will come to feel inferior.
Identity vs. role confusion	Adolescence	Adolescents must develop a clear sense of self. They must acquire their own unique roles, values, and place in society. If they are unable to piece together these elements into a coherent view of self, role confusion results.
Intimacy vs. isolation	Young adulthood	Young adults must be willing to risk offering themselves to others. An inability to give to another can lead to feelings of isolation.
Generativity vs. stagnation	Mature adult	Adults must gain a sense that they have contributed to the world in some lasting fashion. Through child rearing, civic deeds, or paid work, they must come to feel they have in some way given to others. Those who do not achieve this sense may suffer stagnation—a sense that there is no direction or purpose to one's life.
Integrity vs. despair	Older adult	Older adults must come to feel great satisfaction with the events and accomplishments of their lives. They must look back on their experiences with pride and acceptance. Those who cannot feel this satisfaction as life draws to an end suffer great despair.

SOURCE: From *Childhood and Society* by Erik H. Erikson. Copyright 1950 © 1963 by W. W. Norton & Company, Inc.

**Industry:** Erikson's term for an emotional state, often acquired in the elementary years, in which children feel competent because of successes in and out of school. Repeated failure will result in an opposite emotional state: *inferiority*.

Preschool children are content to make many creative attempts regardless of the outcome. However, during the early elementary years, from Erikson's viewpoint, children wish to master real skills—the skills of older children and adults. They want to read and write like grown-ups, to excel at sports and other games, and to be strong and smart. Erikson maintains that children who have genuine successes in childhood and whose accomplishments are accepted and appreciated by adults and peers will develop a sense of **industry**—a feeling of competence. Conversely, those who consistently experience failure and lack of acceptance will develop a sense of inferiority.

### Working with Adam

Psychoanalysts would view Adam's difficulties as primarily emotional. They would search for solutions to his problems by exploring his early life and, in particular, his mother's socialization practices. (Recall that his mother is very young, has four children, and suffers from depression.) Was Adam's mother warm and nurturing? Did she promote trust? Did she allow him to become autonomous and to take initiative? Or did she inhibit his efforts at self-expression? Answers to these questions would guide decisions about intervention.

Children who are aggressive, like Adam, very often have not formed secure attachments to parents or other adults (S. Calkins, 2004; Mitchell-Copeland, Denham, & DeMulder, 1997). They may, in Erikson's words, "mistrust" their environment and the people in it. A first step in working with Adam, then, might be to create for him a safe, predictable classroom environment and a strong bond with a teacher. An orderly classroom with stable enrollment and staffing and a consistent routine could help establish trust. A certain teacher might be assigned to spend time with Adam, giving warmth and nurturance and responding with enthusiasm to his accomplishments. Over time, Adam might come to trust this teacher. This attachment could facilitate positive relationships with other teachers and peers. Because bonds take time, this adult might continue to work with Adam for an extended period. The staff might rethink the practice of graduating children to a new classroom and teacher each year, for example.

Because a lack of trust is at the root of Adam's difficulty, from a psychoanalytic standpoint, great care would be taken to avoid harsh, punitive discipline, which is so common in the lives of aggressive children. Punishments for aggression (even Skinner's time-out) would, at best, control short-term behavior; at worst, they would engender further hostility and mistrust in Adam.

Once Adam has become attached to one or a small number of adults, he could be encouraged to be autonomous in his play and learning. He should be allowed to make choices, express himself, take risks, and explore his environment with minimal restriction. This is not to say that he should be allowed to do whatever he wishes. Psychoanalysts believe that adults must provide limits; need gratification must be controlled and redirected, or children become too egocentric and demanding.

Later, if Adam shows a healthy sense of autonomy, he could be encouraged to take initiative. From a psychoanalytic viewpoint, play and art activities that allow interpersonal expression would be most important during this period. These experiences would allow Adam to make creative attempts and to become bold and confident. They would also provide him with an opportunity to *work through* troublesome life experiences.

In the primary grades, Adam would need to experience success. According to Erikson, it is real achievement that nurtures a child's sense of industry. If Adam were to fail constantly in school or with friends and family, he would develop a sense of inferiority.

### Critique and Multicultural Analysis

A number of concerns have been raised about the psychoanalytic theory and its usefulness in teaching and parenting. The most commonly cited weakness is that it does not explain development of the whole child but only a narrow range of emotional states (R. M. Thomas, 2004). How can a psychoanalytic perspective inform the teaching of reading or mathematics in the classroom? What implications does it hold for enhancing motor development? The theory does not seem to appreciate the interrelatedness of intellectual, physical, social, and emotional growth.

Another common criticism has been that the entire theory is based on personal observations of a small sampling of individuals. Freud, for example, drew his conclusions from case studies of 19th-century Viennese adult psychiatric patients, most of whom were white, upper-middle-class

women. There have been recent charges that some of his case studies were of composites rather than real people! Although Erikson observed children in a variety of cultures, his work is also based on the subjective interpretation of a small number of cases (R. M. Thomas, 2004).

Multicultural and feminist scholars have elaborated on these limitations. Boykin and Toms (1985) have argued that some psychoanalytic stages of personality development, such as autonomy, reflect Anglo-Saxon ideals that are not appreciated in all cultures. Some ethnic groups value collective thought and action, so they emphasize behaviors such as relying on other people, checking with others before taking action, and sharing possessions. In some Japanese American families, for example, a sense of belonging and collectivism—not individual autonomy—are goals in child rearing. Similar values of collectivism have been reported in African American, Puerto Rican, and Native American cultures (DeGenova, 1997; Shulruf, Hattie, & Dixon, 2007).

Gilligan (Gilligan, 1993a; Gilligan, Brown, & Rogers, 1990) further suggests that psychoanalytic theories tend to view the development of male children as normal or ideal and thus portray unique features of female development as deficient. For example, from Gilligan's view, separating from parents and becoming an autonomous person are uniquely important to the personality formation of boys, while attachment and intimacy are the norm for girls. Yet psychoanalytic theorists interpret separation as healthy and intimacy as a sign of overdependence.

Taken together, these criticisms suggest that not all children can be expected to develop through stages of emotional growth as Erikson and Freud have described them. Some children will form stronger bonds with family and community than will others. Some will display less autonomy and initiative, others more.

## COGNITIVE-DEVELOPMENTAL THEORY

The **cognitive-developmental theory** holds that mental growth is the most important element in children's development. Cognitive developmentalists argue that almost all aspects of human life—even making friends, feeling happy or depressed, or enjoying a sunny day—are directly influenced by thinking and language. Making friends, for example, is determined in part by one's knowledge of peers and how they behave. Feeling sad often stems from one's mental interpretation of events of personal predicaments.

Intellectual functioning is extremely complex and internal from a cognitive-developmental perspective. A skill such as reading or performing a new math operation is not learned merely by a change in behavior, as behaviorists might contend. Nor do these skills simply unfold, as maturationists might argue. Learning such skills involves intricate and internal mental actions; the learning occurs through elaborate processes inside the learner's mind, not outside it.

One of the most influential of the cognitive developmentalists, Jean Piaget (1896–1980), integrated elements of psychology, biology, philosophy, and logic into a comprehensive explanation of how knowledge is acquired. A fundamental principle of his theory is that knowledge is constructed through the action of the learner (Piaget, 1971). (Students of Piaget have often used a carpentry metaphor to describe this action; his theory is often referred to as “constructivism” [R. A. DeVries, Zan, Hildebrandt, Edmiason, & Sales, 2001].) The action to which Piaget refers might be physical. For example, a baby comes to know about a rattle by banging it and listening to the noise it makes. Learning also involves mental action: the learner must do something mentally with new information to really learn it.

Piaget's idea that learning involves action is illustrated by the following example. A toddler who lives in the city takes a ride in the country with her father. She sees a cow and calls out “doggie!” The father responds, “That's a cow.” They pass another cow, and another, and eventually the child calls it by its correct name. What has happened here

**cognitive-developmental theory:** A theory of human development holding that knowledge is actively constructed by the child and that active problem solving, social interaction, and language are necessary for learning.



Jean Piaget is the most noted cognitive-developmental theorist.

appears simple but is actually quite complex. When the child came across this strange new animal, she had to fit it into something she already knew about; that is, she had to make sense of her experience based on previous understandings. She knew about dogs, so she decided that this must be an example of a dog. She had fit this large animal with horns into her mental category *dog*. Piaget (1971) calls this step in the learning process **assimilation**. The child has assimilated this new phenomenon into something she already knows about.

However, the child would still not have learned much had assimilation been the only step. Another mental action was necessary. As the child looked at the cow, noticed its size and horns, and heard it say “moo,” she became puzzled. Puzzlement is critical for learning, according to Piaget. “This is a little different from a dog,” she may have thought. So, she had to adjust her previous conception of animals a bit. Piaget calls this process of modifying previous understandings **accommodation**. The child may have created two categories of animals, perhaps “doggies” and “great big doggies with horns.” (A child in one research study actually invented the name “biggiedoggie” for cows.) Conveniently, this child’s father provided a label for this new category: “cow.”

Both assimilation and accommodation are needed for learning. If accommodation did not occur, learners would never modify their thinking about things; in the example, the child would go on calling cows “dogs.” If assimilation did not occur, there would be no previous understanding to rely on; the child in the example would be so confused about the appearance of the cow and what it might be that she would be unable to make any sense of it whatsoever. The ideal learning arrangement, according to Piaget, is one in which the child is confronted with a conflict or dilemma that is personally meaningful but causes puzzlement and requires a modification of previous thinking. Learning experiences should have elements of both familiarity and novelty.

Through assimilation and accommodation, Piaget argues, humans advance through stages of intellectual—or **cognitive development**. These stages are presented in Table 3-3.

**assimilation:** Piaget’s term for a learning process in which humans integrate new ideas or information into what they already know about.

**accommodation:** Piaget’s term for a learning process in which humans modify what they already know to make room for new ideas or information.

**cognitive development:** Mental development, including problem solving and the acquisition of knowledge.

TABLE 3-3  
Piaget's Stages of  
Cognitive  
Development

Stage	Age	Description
Sensorimotor	0 to 18 months	Infants rely solely on action and the senses to <i>know</i> things. Intelligence is an ability to get what one needs through movement and perception.
Preoperational	18 months to 6 or 7 years	Preschool children can use symbols and internal thought to solve problems. Their thinking is still tied to concrete objects and to the here and now. They are fooled by the appearance of things.
Concrete operational	8 years to 12 years	Elementary school children are more abstract in their thinking. They can use early logic to solve some problems and are less fooled by perception. They still require the support of concrete objects to learn.
Formal operational	12 years to adulthood	Adolescents and adults can think abstractly and hypothetically. They can contemplate the long ago and far away. Their thinking is free from the immediate physical context.

SOURCE: Piaget, 1952, 1954, 1959, 1965.

**Sensorimotor stage:** Piaget's stage of cognitive development that encompasses infancy, in which thinking is limited to using physical action and the senses to know about things.

**Preoperational stage:** Piaget's stage of cognitive development that encompasses early childhood, in which children use internal thought, including symbols, but still rely on perception and physical cues in the environment for learning.

**Concrete operational stage:** Piaget's stage of cognitive development that encompasses the elementary years, in which thinking becomes more internal and abstract but which children still need support of concrete objects in order to learn.

Each stage of life is marked by qualitatively different kinds of thinking, according to Piaget. Babies are in the **sensorimotor stage**; they rely purely on action and the senses to know things. Knowledge, to a baby, is getting the things he or she needs through movement and perception. Preschoolers are in the **preoperational stage**; they are able to use internal thought, including symbols, but still rely on perception and physical cues in the immediate environment for learning. Children in the primary grade years are in Piaget's **concrete operational stage**; their thinking and learning have become more internal and abstract. Still, elementary school students need the support of concrete objects in order to learn. Second-grade children will better learn about place value in math, for example, if they are able to discover it by acting on concrete materials. It is not until children reach the **formal operational stage**, according to Piaget, that they can engage in purely abstract thought that is not tied to the physical world. This may not occur until adolescence or early adulthood.

### Working with Adam

Cognitive developmentalists would believe that Adam's difficulties with peers stem from a lack of **social cognition**—that is, an inability to understand social situations or the outcomes of social behaviors. They would cite research showing that highly aggressive children who often inaccurately interpret their peers' actions and motives (Crick & Ladd, 1993; Dodge et al., 2003) are usually not aware of alternative strategies for solving social problems (Nelson & Crick, 1999; Trawick-Smith, 1990). From the cognitive-developmental perspective, Adam may lack important social knowledge. An intervention should be aimed at teaching him how to interpret social situations.

One strategy would be to have Adam view videotapes or observe real-life interactions of peers playing in a variety of social situations. Teachers would then ask questions to guide his

interpretation: What happened when Lawanda pushed Miko? How did Cheryl get Ahman to play with her? How did Hannah feel when Nemah yelled at her? In each case, the teacher would be trying to help Adam learn about social behaviors and situations. Teachers could also intervene in Adam's own conflicts to achieve this same goal. Interventions such as asking "What happened when you pushed Seth?" would guide Adam in interpreting the less-than-positive outcomes of aggressive behavior.

Teachers could also assist Adam in generating alternative solutions to social problems. When angry conflicts come up, for example, the teacher could ask the child to consider nonaggressive strategies: "What else can you do, besides hitting, if you're angry?" or "Can you think of a better way to get the blocks than just grabbing them?"

Besides these focused interventions, cognitive developmentalists would propose creating a classroom environment for Adam that facilitates general cognitive development (R. A. DeVries et al., 2001; Schweinhart & Weikart, 2006). A program that encourages children to play, solve problems, and make sense of novel objects and situations would enhance general intellectual ability and, in turn, social cognition.

### *Critique and Multicultural Analysis*

Because Piaget relied on observations of a small number of typically developing children to formulate his theories, some have asked whether he has described accurately the understandings and behaviors of all children at each stage of development. Research indicates, for example, that children may be more intellectually competent than Piaget has suggested (Flavell, 1996). In addition, some have argued that his observations reflect the development only of children of his particular culture (Braga, 2007). For example, a series of classic studies of Mexican children who had extensive experience with pottery making at an early age showed an understanding of quantity at a much younger age than Piaget's theory would have predicted (Price-Williams, Gordon, & Ramirez, 1969). Other of Piaget's ideas—his emphasis on autonomy in thinking and learning, for example, or the value he placed on games in childhood—have been criticized as Western and male oriented (Ardila & Keating, 2007; Gilligan, 1993a; Harrison, Wilson, Pine, Chan, & Buriel, 1990). These elements of his theory, it is argued, reflect the competitive, individualistic society in which he lived and worked.

In spite of these criticisms, many multicultural scholars view cognitive-developmental perspectives as quite sensitive to cultural and gender diversity (Ogbu, 1992; R. M. Thomas, 2004). Miller-Jones (1988) advocates a cognitive-developmental theory, for example, because it focuses on developmental processes—such as assimilation and accommodation. It does not emphasize the acquisition of specific knowledge or skills, which can vary in importance across cultures. She argues that not all children will learn to tie shoes or use a spoon at a particular age, as Gesell would suggest. Nor will all acquire certain, specific academic or social skills that are shaped by dominant culture, as Skinner would propose. But all children of the world will learn—through assimilation and accommodation—the skills, knowledge, beliefs, and values important to their own family and culture.

### **SOCIOCULTURAL THEORY**

The **sociocultural theory** is also concerned with intellectual development. Theorists of this group, however, believe that thinking and learning are not as internal and individual as Piaget proposed but rather are highly influenced by language, social interaction, and culture. The most prominent sociocultural theorist is Lev Vygotsky (1896–1934), whose work is currently receiving much attention in the field of education. Vygotsky's personal history is quite fascinating. A prolific writer from the former Soviet Union, his most significant work

**formal operational stage**  
Piaget's most advanced stage of cognitive development that encompasses adolescence and adulthood, in which thinking is purely abstract and not tied to the immediate, physical world.

**social cognition:** The ability to understand social situations, including skill at recognizing the outcomes of one's own behaviors and the actions and motives of others.

**sociocultural theory:** A theory that holds that thinking and learning are highly influenced by social interaction, language, and culture.

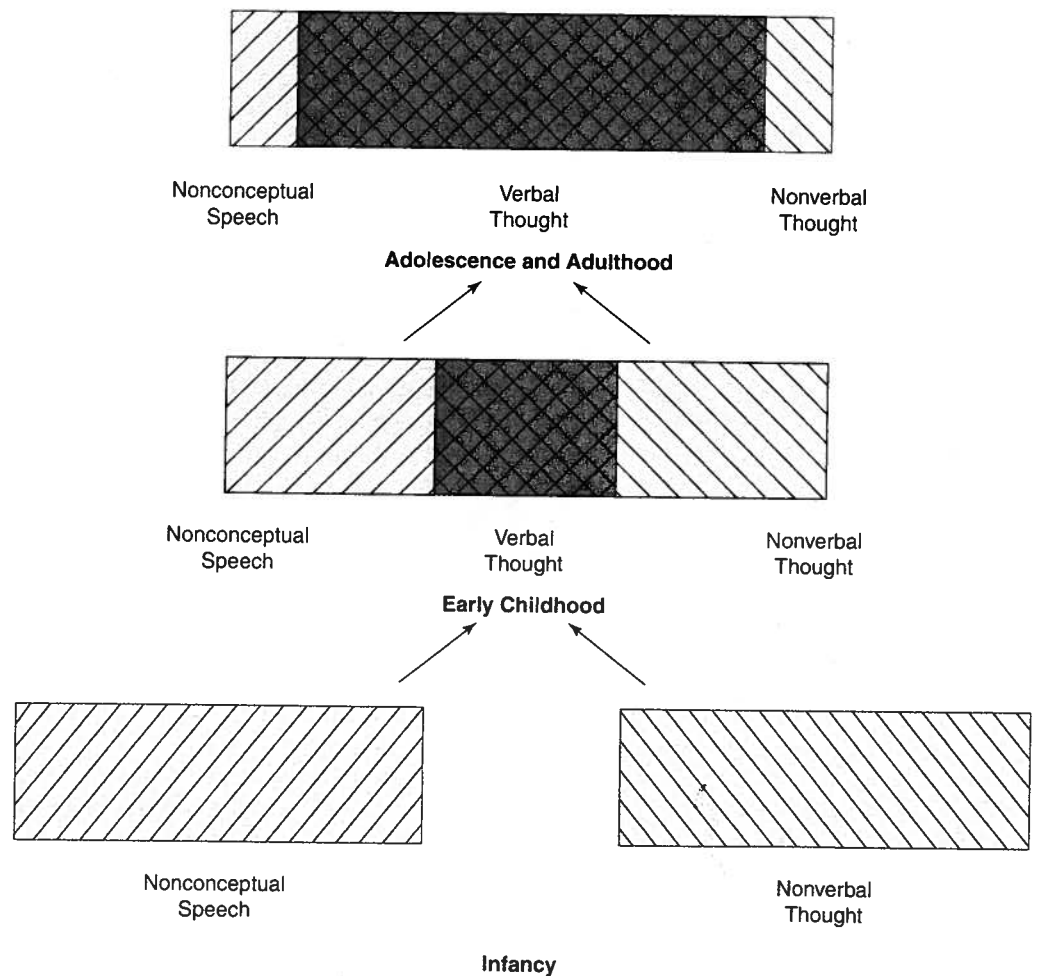
was written during a 10-year period. He died of tuberculosis at age 38. His work was suppressed by the Soviet government for a long time and was not translated into English until the early 1960s. Yet his impact on recent thinking in child development has been profound.

Vygotsky's views are similar to Piaget's in a number of areas. He argues that children construct knowledge through action. When children solve problems with concrete objects, they acquire new concepts (Vygotsky, 1962). He also describes stages of intellectual development, as Piaget has done, but his theory differs from Piaget's in one fundamental way: he assigns greater importance to external influences—language, social interaction, and the larger society.

Vygotsky's theory is illustrated in Figure 3-1. He proposed that children engage in two distinct and independent mental activities in the earliest months of life—nonverbal thought and nonconceptual speech. In **nonverbal thought**, children observe objects or events or perform actions without using language. An example would be an infant pounding a rattle and attending to its sound. In **nonconceptual speech**, a child utters words or phrases without thinking fully about what they mean. Examples are playful babbling or the rote recitation of a song.

**nonverbal thought:** An early form of mental activity in which children observe objects or events or perform actions without using language.

**nonconceptual speech:** An early form of language in which children utter words or phrases without thinking fully about what they mean.



**FIGURE 3-1** According to Vygotsky, speech and thought are separate processes in the early years. As children get older, they integrate the two into verbal thought. By adolescence, most mental activity involves verbal thought.

To Vygotsky, language and thinking are, at first, separate processes. Intellectual development involves connecting language and thinking. A toddler gradually associates the sound of a rattle, for example, with verbal labels—*rattle*, *noise*, or *loud*. Only when language and thought are related in this way can children think in more complex ways.

During the preschool and primary years, according to Vygotsky, children engage in much **verbal thought**, in which language and thinking are integrated and mutually supportive. Verbal thought allows the acquisition of complex concepts. An understanding of size, for example, is enhanced when children can use words like *small* or *smallest* and *big* or *biggest*. **Self-directed speech** is a behavior that shows that young children are using language to guide learning. In self-directed speech, children talk to themselves, naming objects or narrating their actions—particularly as they solve problems. When playing a number game, for example, a kindergartner might be overheard counting out loud. Vygotsky notes that the more difficult a problem is, the more frequent a young child's self-directed speech is. Until 7 or 8 years of age, there is still much isolated nonverbal thought and nonconceptual speech. Young children continue to engage in rote verbalizations or perform actions without using language.

In adolescence and adulthood most thinking is accompanied by language, as shown in Figure 3-1. When solving problems or learning new concepts, adults essentially speak to themselves. Of course, much of this language is internal, but adults sometimes engage in out-loud self-directed speech when a learning task is difficult. It may be that readers of this book are muttering these passages aloud as they struggle to understand Vygotsky's theory!

According to Vygotsky, then, language is not merely a mode of expression—a reflection of what children already know, as Piaget described it—but also a fundamental tool for constructing knowledge. Needless to say, a quiet classroom where children just sit and listen is not optimal for learning from this view. When teachers use language and encourage children to do the same, they are enhancing thought as well as speech.

Vygotsky's theory contains practical ideas for promoting intellectual development. He proposes that teachers and parents **scaffold** children's learning—that is, use language and other social interactions to guide thinking. Here is how scaffolding works: When children are faced with problems they can solve on their own, adults should not interfere. Independent thinking is an ultimate goal of teaching or parenting from Vygotsky's view. However, if tasks are so challenging to a child that they are insurmountable, adults should offer direct solutions. There are times, however, when problems or tasks are only slightly above a child's ability level. Here adults can ask questions or give hints that allow the child to solve problems independently. When adults indirectly guide children's own thinking and learning in this way, intellectual growth occurs. Parents and teachers should watch, then, for moments when indirect guidance can be given. Such periods are in what Vygotsky calls the **zone of proximal development**. This zone is represented in Figure 3-2.

An example of learning to read illustrates Vygotsky's ideas of scaffolding and the zone of proximal development: A 6-year-old is reading a picture book and becomes stuck on a word. If she is completely stumped, her parent should assist her very directly. He might read the text for her or even guide her to an easier book. If, however, the child quickly figures out the word and continues with the story, the parent should not interfere at all. Independent reading is the ultimate goal. But what if the child is close to figuring out the word on her own? This would be a situation within the zone of proximal development and a moment when an adult might be most effective in promoting literacy. The parent might give a hint or ask an interesting question to guide the child in solving her own problem. "Look at the picture," the parent might suggest. "What is the wolf doing? Does that help you figure out the word?" Or the parent might offer the sound of the word's first letter: "P-p-p. What word in your story would start with that sound?" To Vygotsky, such interactions are most powerful in promoting learning.

**verbal thought:** A kind of thought in which language and thinking are integrated and mutually supportive. In verbal thought, children use language such as verbal labels and self-directed speech to guide learning.

**self-directed speech:** Verbal behavior in which children talk to themselves, naming objects, narrating their actions, particularly as they solve problems.

**scaffold:** To use language and social interactions to guide children's thinking. When scaffolding, adults offer direct solutions to problems, indirectly guide them with hints or questions, or allow them to think completely independently, depending on what they need to learn.

**zone of proximal development:** A situation in which a problem or task is only slightly above a child's ability level. In this zone, adults can ask questions or give hints that allow the child to solve the problem independently.

### Vygotsky's Zone of Proximal Development

Task Difficulty Level:

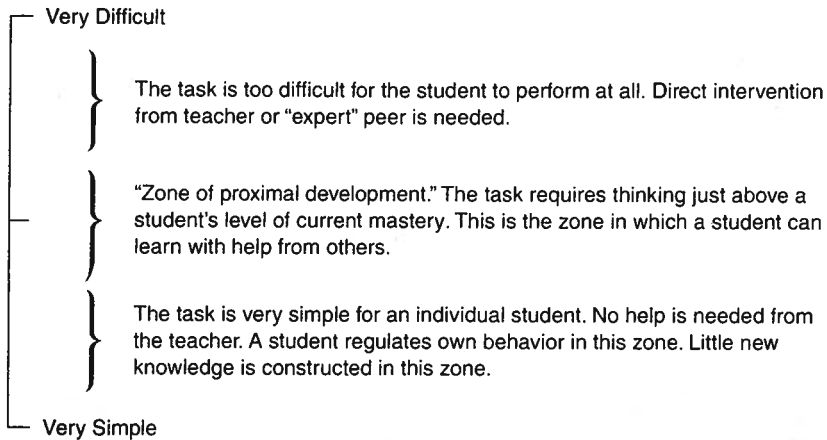


FIGURE 3-2 The zone of proximal development is a period during problem solving when a task is just beyond a child's level of mastery. This is a time when an indirect prompt or question can help children solve the problem independently.

SOURCE: Vygotsky, 1978.

### Working with Adam

Vygotsky's ideas for helping Adam would be similar to Piaget's. He would propose intellectual interventions—strategies to help Adam think about social problems and solve them independently. Following Vygotsky's framework, scaffolding would be the primary tool to accomplish this. Teachers might watch for an opportunity when a question or suggestion would help Adam resolve a conflict with a peer on his own: "You both want the same riding toy? What would be a good way for you both to use it?" Of course, if such prompts did not help Adam, a more directive intervention could be tried: "One thing you could do is take turns." However, if Adam was able to solve the difficulty on his own, a watch-and-wait strategy could be chosen with no intervention. From Vygotsky's view, Adam's teachers should decide in each circumstance how much assistance to give him.

Similarly, Adam's interpretation of social problems could be scaffolded. If Adam pushed another child, a prompt might help him discover, on his own, the negative outcome of this act: "What happened when you pushed Jamal? How did it make him feel?" Once again, if indirect prompts did not work, a more directive intervention could be used: "I think Jamal got hurt. See how he's crying?" The hope is that Adam would eventually be able to interpret social events independently.

Vygotsky would also recommend that language be used to guide Adam in thinking about and solving social problems. Teachers might offer phrases to help him remember appropriate social responses. After an aggressive interchange, for example, a teacher might say, "If you're mad, you should say, 'I don't like that!'" Words might also be offered to help Adam understand his own feelings or those of his classmates: "He's very sad that you pushed him" or "I can see you're very angry." Encouraging Adam to talk through conflicts out loud would help him think in more complex ways about social relationships.

### *Critique and Multicultural Analysis*

Because of Vygotsky's untimely death, his work is considered to be incomplete and sketchy (R. M. Thomas, 2004). Much of his writing has only recently been available to Western scholars, so it is relatively new to mainstream psychology. A small but growing cadre of modern researchers are now extending and testing his theory (Berk & Winsler, 1995; Reunamo & Nurmilaakso, 2007; Rogoff, 1997, 2001, 2003). Although some have criticized his ideas as merely reflecting the Marxist–Leninist thinking of his time and culture (Bruner, 1984), much research supports his perspective (Rogoff, 2003). Vygotsky's theory has been viewed as particularly practical, with direct applications to teaching (Bodrova & Leong, 1996, 2003a; Trawick-Smith, 2008) and parenting (Freund, 1989). This is likely due to a tradition among Soviet psychologists to seek solutions to community problems or to improve the well-being of disadvantaged groups within society (R. M. Thomas, 1999).

The sociocultural theory receives high marks from multicultural scholars because it views development as social and collective rather than purely individual (Rogoff, 1997, 2001, 2003). Vygotsky's concepts of collaborative learning and joint problem solving relate well to the collective orientation of many non-Western families. His beliefs about testing and assessment, for example, are viewed as particularly sensitive to other cultures. He argues that scores on individually administered tests are not good measures of competence for most children. What a child is able to do with help from others is what is most indicative of intelligence. Thus, banding together with others to solve problems—as is common in many non-Western families—is more significant than individual achievement.

Vygotsky's theory is one of the few that appreciates the influence of culture on development. From his view, teachers and parents impart to children not only specific social skills and academic knowledge but also the values and customs of the larger society. Further, individual learners can have an impact on culture. The zone of proximal development is said to be a “transaction” in which children and adults influence one another's thinking (Rogoff, 1997).

### INFORMATION PROCESSING THEORY

The **information processing theory** is another theory concerned primarily with intellectual development and learning. Information processing theorists believe, as Piaget and Vygotsky did, that humans learn by actively constructing meaning from the world around them. When confronted with a new or puzzling phenomenon, they use previous knowledge and thinking skills to make sense out of it. One way that information processing theory differs from the ideas of Piaget and Vygotsky is in the importance it places on specific thinking processes, such as paying attention and remembering (Siegler, 2000, 2007). Also, many information processing theorists reject Piaget's fixed stages of cognitive development, believing instead that thinking changes gradually and smoothly over time as the mind becomes more efficient (Klahr & MacWhinney, 1997). Children's growing awareness of and ability to control their own thinking also accounts for changes in their cognitive competence, from this view (Siegler, 2007b).

Information processing theorists often use the computer as a metaphor for what humans do when they are thinking. A young child who sees or hears something new—say, a word to describe an unfamiliar fruit at the family dinner table—retrieves this information, stores it, remembers it, and modifies it over time, similar to the way a computer operates. Like a hard drive, the child's memory is limited and can become overloaded if too many mental actions are required at one time. If three or four new foods appear on the table at once, for example, the child may not be able to learn and remember the names of all of them. With age, the

**information processing theory:** A theory of development that emphasizes how children learn specific situations, rely on memory, attention, and other learning processes. This theory compares the learning process with the way a computer stores, modifies, and retrieves information.

child's mind works more efficiently and can store greater amounts of information, as if its owner has acquired an upgrade and additional memory.

Information processing researchers study two specific thinking processes that contribute to learning—**attention** and **memory**. In order for children to learn, from this view, they must pay careful attention to the things that are most important in a learning task. In a math lesson, for example, children must focus their attention on a particular aspect of the shapes being categorized—the number of sides they have. They must ignore other, irrelevant stimuli—the size of the shapes, the color of the marker the teacher is using to explain the problem, even the joke a nearby peer is whispering to a friend. Very young preschoolers tend to focus on many different aspects of a situation, almost at random. They give less thought to what is most important to look at or listen to. Older preschoolers, 4- and 5-year-olds, are better able to focus on those things that are critical for solving a problem or pleasing adults (Jones, Rothbart, & Posner, 2003; Miller & Seir, 1995). At this age their control over attention still comes and goes. One minute they might focus on an important aspect of a preschool activity but the next be distracted by something occurring in another part of the room. Only in later childhood are their attention abilities finely honed.

Learning also requires that children store new information in memory, according to the information processing theory. Remembering things well requires that children actively select what is important to remember and use specific strategies to store this information (Cowan, 2007). For example, elementary school children can repeat over and over to themselves information to be remembered, a learning strategy called *rehearsal*. They can also use a technique called *organization*, in which they arrange like ideas in groups within their memory storage and label them verbally. For example, a child trying to remember the names of types of transportation might store these in groups, under the labels, “things that go through the air,” “things that go in the water,” and “things that go along the ground.” Preschoolers lack the ability to use these strategies effectively. Also, they are less clear on what “remember” means. They have been found to define “know” or “remember” as “getting the right answer,” for example (Lockl & Schneider, 2006; Miscione, Marvin, O'Brien, & Green, 1978). Still, preschoolers are aware of and have some control over knowing and remembering processes. They understand that “know,” “remember,” and “pay attention” involve doing something special in the mind. When a parent says “Now remember,” or a teacher says “Try to learn this,” children give special attention to the information that follows. They are more likely to retain it than if they were not given these cues (J. Flavell, Green, & E. R. Flavell, 1995; Peskin & Astington, 2004).

Over the last few decades, a group of researchers—calling themselves **social information processing theorists**—have begun applying tenets of the original information processing theory to the study of social behaviors and social problems of young children (Dodge & Rabiner, 2004; Lemerise, Gregory, & Fredstrom, 2005; Rah & Parke, 2008). They have argued that thinking processes, such as attention and memory, influence social interactions of children in the same way they guide other kinds of learning. In any social situation, they argue, children follow a series of mental steps to understand the behaviors of others and to decide how to respond. First, they pay attention to, encode, and interpret **social cues** in the situation—actions, facial expressions, tone of voice, spoken words—that help them figure out what is occurring and why. If a child has knocked over another child's block structure, for example, the victim might study the perpetrator's face for signs of intentionality, such as smiling or laughter. The child might observe whether the action appeared to be an accidental bump into the structure or a purposeful kick. Note that the ability to perform this step requires the child to pay attention to aspects of the situation that really matter, just as in other learning settings.

Next, the child must relate these cues to previous social experiences that have been stored in long-term memory. The child might reflect on prior interactions with this particular peer or on whether peers who knock over blocks are usually trying to be mean. Based on stored information as well as social cues, the child clarifies the situation and sets goals for the interchange. The child might decide to simply build another building and ignore the

**Attention:** A mental strategy in which learners consciously control what they focus on, so they concentrate on only one or several of the most relevant phenomena at any time.

**Memory:** Events or experiences that are encoded in the mind and can later be retrieved.

**Social information processing theory:** An information processing theory that explains how children attend to, interpret, store in memory, and later retrieve the social cues they observe during interactions with others.

**Social cues:** Actions, facial expressions, tone of voice, spoken words, and other social signals formed by peers that young children interpret in social situations.

peer's behavior. Or, the child might choose to communicate anger or even retaliate. Because this step is guided by memories of previous experience, the information the child has selected to store away is very important. It determines whether the child will rely on accurate and useful information from the past or that which is less helpful. As in all types of learning, memory is critical, from an information processing perspective.

In yet another step in responding to a social situation, the child now weighs the various options for responding to the situation. Should the child kick the perpetrator's block structure down? Should there be angry words? Should the action be ignored? This includes more interpretation, based on stored memories. The child considers what the consequences may be for each action. What have peers or teachers done in the past in reaction to this sort of retaliation? Will they get angry? On the other hand, will the peer keep knocking over the blocks, if the child does nothing? Finally, the child decides on and performs a response. Although the steps are many and seemingly complex, social information processing theorists argue this mental process can take place in a matter of seconds.

During and after the social situation, the child stores the entire experience in memory to be referred to later. Thus, each interchange adds to the child's stored information about the social world. Children who engage in this mental processing are often, though not always, able to resolve social problems positively. However, children who store inaccurate information or lack an ability to follow these steps at all do not have positive relationships with peers. Children who are extremely angry or hostile, for example, will react with little thought, often assuming peers have sinister motives and striking out aggressively (del Castro, Slot, Bosch, Koops, & Veerman, 2003).

### **Working with Adam**

Information processing theorists would recommend strategies for working with Adam that are similar to those Piaget and Vygotsky would suggest. They would propose that teachers help Adam to better *process* social situations as they occur. However, these theorists would be more specific about the steps they would suggest teachers follow. When Adam appears angry and about to become aggressive, for example, they would encourage teachers to prompt him to pay careful attention to relevant social cues from peers—their frowns, tears, complaints, or the way they move away from him or leave the play area. ("Look at how children walk away when you yell at them. They don't want to play with you anymore.") If peers bump or crowd Adam, a teacher might point out cues that help him see they were not trying to be mean. ("Look at their faces. See how they're smiling? They want to play with you, not bother you.") Teachers can also help Adam to retrieve and reflect on previous experiences during social interactions. They might ask, "How can you tell when someone does something that's an accident? What do they usually say?" or "Does Jasmine usually try to be mean to you, or is she usually very friendly?" Finally, teachers can help Adam consider alternative social behaviors, based on previous experiences. A teacher might say, "What's something you can do if you don't want children to play with you?" or "What would be something else you could do, besides pushing, if you want someone to leave you alone?" Helping Adam to monitor the outcomes of his selected response would help him to refine his stored social understanding: "What did she do when you said, 'You're too close to my building'? She moved back a little, didn't she, and said, 'sorry.'" Social information processing theories would argue that as Adam acquires new learning processes, his social interactions will become more positive (Dodge & Rabiner, 2004).

### **Critique and Multicultural Analysis**

Some scholars believe that the information processing theory focuses too narrowly on specific learning situations and the ways individuals think about and learn from these (Keating, 1996; Tooby & Cosmides, 1992). The theory ignores, these scholars contend, some of the

broad, cognitive processes—assimilation and accommodation or logical reasoning—that Piaget described (Turiel, 2002). Also, some believe the theory is not detailed enough in describing the nature of stored memories. How is social information, which is so helpful to children according to the social information processing theory, organized in the mind? How does a child retrieve and apply this information to a particular social interaction? Such questions have not been fully answered.

Does information processing theory accurately describe the learning of children of all cultures? Some have raised concerns that research supporting this theory has too often been conducted with Euro-American children and that cultural influences have not been adequately studied (Rogoff, 2003). Others point to studies that show that specific learning processes, such as memory or paying attention, can vary depending on cultural traditions, practices, and language (H. Hernandez, 2001). In one study, for example, children from Mexico were found to be able to attend to more sights, sounds, and verbal instructions at one time than Euro-American or Mexican American children (Cerrea-Chavez, Rogoff, & Arauz, 2005). The researchers conclude that children in Mexico are encouraged to pay attention to and learn from the multifaceted activities of their active families, whereas children in American schools are taught to focus on just one thing at a time (e.g., “Look right at me” or “Listen to what I’m saying”). In another study, children from China were found to have a larger memory storage than American children—but only for memory of numbers (Geary, Bow-Thomas, Liu, & Siegler, 1996). Researchers suggest that this is due to language differences. Number words in China are shorter in length and can be spoken more quickly than English number words. What appears to be advanced memory storage, then, may simply be an ability of Chinese children to remember words that are shorter than those learned by American peers.

In spite of these concerns and minor cultural variations, many researchers believe information processing theory is compatible with cognitive-developmental and sociocultural theories, reviewed above (Arsenio & Lemerise, 2004). They see the theory as particularly useful in explaining how children learn in specific social situations.

**Ecological systems theory:** A theory of development that emphasizes the influence of the many institutions and settings—the community, the school, the political system—within which children live. This theory holds that individual development does not occur in a psychological vacuum but is affected by larger society.

**Ecology:** The many different settings or institutions that affect human development.

**Microsystem:** The layer of environmental influences on development that includes all institutions and experiences within the child’s immediate environment. The family, the school, and peers are examples.

## ECOLOGICAL SYSTEMS THEORY

The **ecological systems theory** focuses most directly on child and adolescent development within the larger world. Unlike the perspectives previously reviewed, this theory emphasizes the influence of the many institutions and settings—the community, the school, the political system—within which children live. Urie Bronfenbrenner (1995), the leading proponent of this theory, has been critical of psychologists and educators who focus only on individual growth and behavior without regard for the social, political, or economic conditions in which children grow up. He maintains that the family, local social service agencies, schools, state and federal governments, the media, and the current political thinking of the time all must be considered in a comprehensive explanation of human development.

Bronfenbrenner uses the word **ecology** to refer to the settings and institutions that influence the growing human being. He suggests that there are multiple ecologies—that is, many different settings—that affect development. Further, he proposes that these ecologies lie in distinct layers or ecological systems around the developing human. Figure 3-3 illustrates graphically how these ecological systems interact with one another and the individual child.

As shown in the figure, the first layer, the **microsystem**, most directly affects development. The microsystem comprises all institutions, experiences, and influences within the child’s immediate environment. These include the family, pediatric services, some social services, the school, teachers or child care providers, and peers. The child both influences and is influenced by these persons and institutions. For example, a child’s social behavior is enhanced by certain teacher interventions, and the teacher interventions are affected by the child’s behavior.

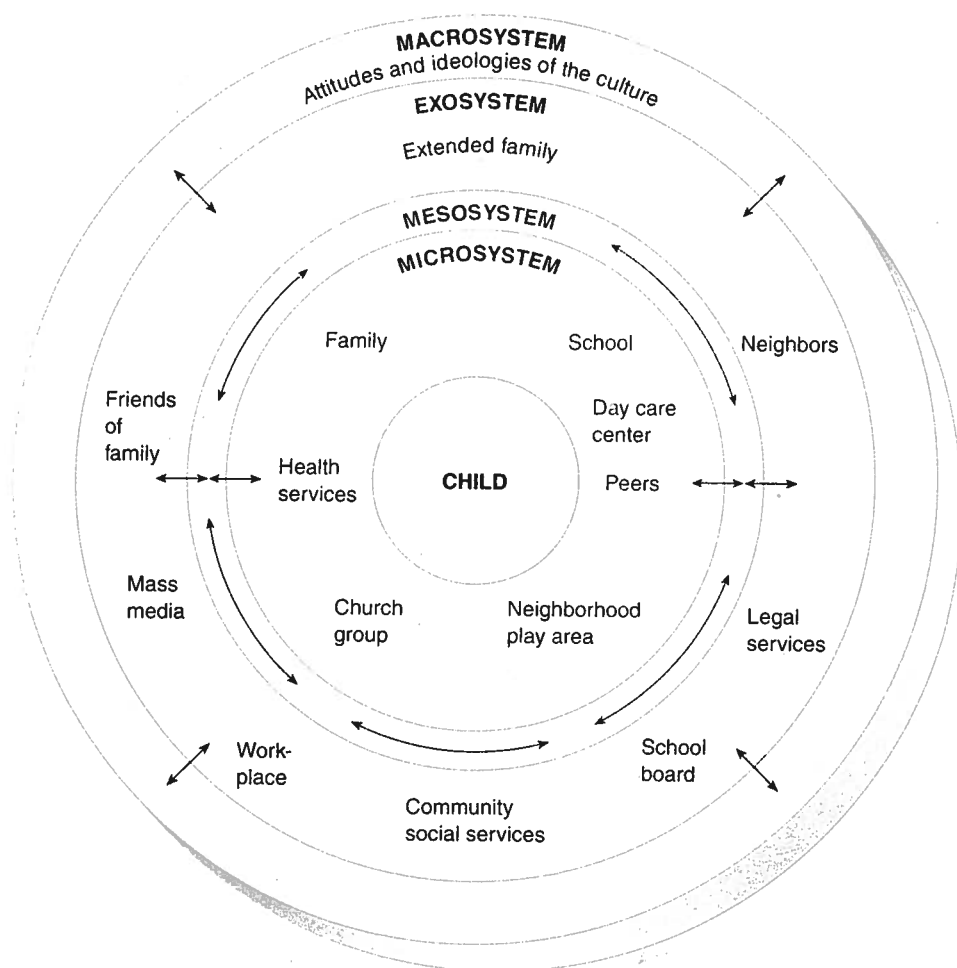


FIGURE 3-3 According to Bronfenbrenner, various ecological systems interact with each other to influence child development.

SOURCE: Kopp, C. B., & Krakow, J. B. *Child Development in Social Context*. Copyright 1982 by Addison Wesley Publishing Co., Inc. Reprinted by permission.

Institutions within the microsystem influence one another; for example, parents are affected by schools and schools by parents. A teacher may provide information to a pediatrician about a medical problem; the pediatrician may, in turn, make recommendations for in-class adaptations to address the problem. Bronfenbrenner has argued that these interconnections make up the second ecological layer—the **mesosystem**. When strong, supportive linkages exist among persons or organizations in the microsystem, according to ecological systems theory, positive child and adolescent development is enhanced.

Additional ecological systems affect children indirectly. As shown in the figure, the **exosystem** is composed of institutions or persons that do not actually touch children's lives but that indirectly affect their experiences. For example, the legal services system, a friend of the family, or the public assistance office may not directly promote social or intellectual growth of children. However, they may enhance the mental or physical health of the family, provide resources needed for adequate nutrition or shelter, or improve the effectiveness of parents. These positive influences will, in turn, promote healthy child development.

**mesosystem:** The layer of environmental influence on development that is composed of the interconnections among the persons or organizations within the microsystem. Parent-teacher communication and collaboration between child care center and public schools are examples.

**exosystem:** The layer of environmental influence on development that is composed of institutions or persons that do not actually touch children's lives but that indirectly affect their experiences. The legal services system or the public assistance office are examples.

The final ecological system shown in Figure 3-3 is the **macrosystem**, which contains the overarching values, ideologies, laws, worldviews, and customs of a particular culture or society. Although institutions of the macrosystem seem far removed from individual child development, they are extremely influential. An example of this is provided by Berk (2006), who reports that child abuse is more prevalent in societies where the use of physical punishment or force in child rearing is accepted. In cultures where values of respect and caring for children are the norm, abuse is less common.

### *Working with Adam*

In previous sections, we have identified a number of classroom interventions based on theories of child development. These strategies would be viewed as too narrow by ecological systems theorists. Addressing individual behavior, feelings, or social understandings merely within the school setting would affect only one small element within Adam's microsystem. From an ecological systems perspective, a much broader social intervention would be needed.

A first step in addressing Adam's challenging behaviors would be to create supportive linkages among the microsystem institutions in his life. Teachers, social service professionals, medical personnel, and Adam's mother would need to collaborate in finding solutions to his difficulties. For example, the teacher might arrange for a planning meeting with Adam's mother and other significant family members, social and mental health service providers, and other professionals working with Adam and his family. A collaborative intervention—to be implemented in the home, the classroom, the community center, or home-visiting program—might be devised. For example, the psychoanalytic approach of promoting attachment could be implemented collaboratively across settings in Adam's microsystem. Individuals in each setting would provide predictable, nurturing, and responsive environments that enhance emotional bonds. Regular meetings could then be held between the parent and teacher to discuss problems and successes in implementation.

The teacher might visit Adam's home, and his mother might be invited into the classroom. Parent education programs might be planned. The purpose of these initiatives would be to increase interconnections between school and family—that is, to strengthen the mesosystem. Following ecological systems theory, the teacher might adopt strategies to address other ecological systems. Assistance might be given to Adam's mother to obtain mental health services or to access resources to feed and clothe her family. The teacher might even assist in crisis management, helping the mother obtain legal services or career counseling when needed. Although such support activities are viewed by some as exceeding the limits of a teacher's role, they are absolutely crucial exosystem interventions from an ecological systems perspective. Without them, no amount of in-class intervention will have a lasting impact.

Finally, the teacher might even launch a campaign to alter problematic elements in Adam's macrosystem. Political action against elected officials who threaten to cut child and family services might be undertaken. Lobbying activities to promote the regulation of television violence might be initiated. Advocacy would be a regular professional responsibility of teachers from this perspective. These efforts would be based on a fundamental principle of ecological systems theory: child development problems are best addressed within a compassionate and caring society that values and protects its children.

**macrosystem:** The layer of environmental influences on development that contains the overarching values, ideologies, laws, worldviews, and customs of a particular culture or society. A society's respect and caring for children is an example.

### *Critique and Multicultural Analysis*

Few research studies have examined child development from the perspective of ecological systems theory. Such work is exceedingly time consuming and challenging (M. B. Spencer, 1985). Identifying all the macrosystem, exosystem, mesosystem, and microsystem variables that affect children's social or intellectual development would be a formidable, if not

impossible, undertaking. Studies have been conducted to determine some of the microsystem and exosystem causes of childhood problems. Certain **risk factors**—conditions that may lead to poor development—have been identified. These include poverty, lack of social services, violence in the community, poor housing, family disharmony, and child abuse (Deng & Roosa, 2007; Werner & Smith, 1992). Conversely, **protective factors**—conditions that may insulate children from the negative effects of poverty or community violence—have been studied (Garbarino, Dubrow, Kostelny, & Pardo, 1992; J. L. Robinson, 2000). Among these are a positive home environment, attachment to parents, adequate housing and safe neighborhoods, and a positive preschool experience. Very few theorists of any field would deny the importance of these factors in shaping children's development.

The ecological systems theory has been viewed as culturally sensitive. It not only accepts cultural differences but also fully integrates these differences into an explanation of human development. Customs, language, worldviews, and histories of particular ethnic groups—all part of the macro-, exo-, and microsystems—are viewed as fundamental aspects of the developmental process. For example, the learning and behavior of African American children should not be studied in isolation from the social and political world. The historical roots of slavery, experiences of oppression, conditions in the immediate neighborhood, and economic hardship would be considered integral aspects of the developmental process (M. B. Spencer, 1999).

Because ecological systems theory focuses on the social, political, and economic contexts in which development occurs, it is believed to be most useful in identifying social issues concerning children in poverty or those of historically underrepresented groups. Unlike perspectives that focus on individual development, ecological systems theory informs policymaking and advocacy activities. (See the Advocacy and Public Policy box in this chapter for an example.) In fact, Bronfenbrenner's model has been a favorite among child development advocates and activists (Garbarino & Kostelny, 1992; M. B. Spencer, 1999; Zigler, 1998).

**risk factors:** Condition in a child's life that can lead to poor development including poverty, community violence, and child abuse.

**protective factors:** Conditions that might insulate children from the negative effects of risk factors. Attachment to parents and positive preschool experiences are examples.

## ADVOCACY AND PUBLIC POLICY

### *Reducing the Stigma of Parental Depression*

Research has demonstrated that children of parents who are depressed are at risk of behavioral and emotional problems (Dawson et al., 2003; Lundy et al., 1999). Parental depression is the most powerful predictor of childhood depression (Verdeli, 2004). One reason for this is that depression affects the quality of parent-child interactions. Unfortunately, many parents who are depressed will not seek treatment because of the societal stigma associated with this disorder (Glass, 2003). Depression has been viewed by many as a human weakness; those with this disorder have often experienced discrimination.

Following Bronfenbrenner's ecological systems theory, presented in this chapter, teachers and caregivers can address this problem at various levels. At the microsystem level, for example, they can offer special support in the classroom to a child whose parents are depressed. They can assist

a parent in obtaining mental health services from a community agency—an exosystem strategy. These efforts will greatly assist individual children and families.

Professionals can also take action to reduce the effects of parental depression on all children in the community through a macrosystem intervention. They can serve as advocates for families by working toward reducing the stigma of depression in society as a whole. They might organize schoolwide programs in which mental health professionals are invited to present information on depression to parents and other members of the community. They might write school newsletters or letters to the editor of the local newspaper that dispel prevalent myths about depression. The National Institutes of Mental Health (NIMH, 2004) suggest that the following key points be emphasized: (a) depression is a

(continued)

very common illness, afflicting more than 18 million Americans; (b) for the majority of sufferers, the disorder can be effectively treated; (c) depression does not stem from "personal weakness," sufferers cannot simply "pull themselves together" and recover, and treatment is critical; and (d) women, particularly mothers, are prone to this disorder.

Professionals can become involved in addressing the stigma of depression and other mental health disorders at a national level. They might join the campaign of Mental Health America (<http://www.nmha.org>) to pass state and federal legislation requiring full med-

ical insurance coverage for the treatment of mental illnesses. They might help organize local chapters of the National Depression and Bipolar Support Alliance (<http://www.dbsalliance.org>) or the Partnership Network of the National Institutes of Mental Health (<http://www.nimh.nih.gov/health/outreach>), organizations committed to educating the public on the nature and treatment of depression and other mental illnesses. Through such advocacy, professionals can help parents who suffer depression surmount the societal obstacles to treatment and, in turn, help their children enjoy an emotionally healthy childhood.

## SUMMARY

Child development theory is a system of beliefs about how children grow, learn, think, and behave. There are several prominent theories of child development; each can be applied to solving real problems or promoting learning in a classroom. From a maturationist perspective, teachers and caregivers should adapt environments to the inborn, genetically determined needs and characteristics of children. In contrast, behaviorists would urge that desirable behaviors be shaped through the direct use of rewards and modeling. Cognitive-developmental theorists would suggest that most classroom problems can be solved by supporting intellectual development. From this view, children would be helped in actively and personally constructing knowledge about the world. From a sociocultural perspective, this construction of

knowledge can be greatly enhanced when adults use rich language and provide for peer interactions. Information processing theorists also believe social interactions can support learning—particularly if children are guided in learning processes, such as attending and remembering, and in accurately interpreting social cues. Ecological systems theorists would contend that positive development is ensured only when all influences on children—direct and indirect—are addressed. Teachers should work with families and social service agencies and should even try to change society as a whole. Some theories—sociocultural and ecological theories, for example—are preferred by multicultural scholars because they acknowledge the powerful effects of families and culture on children's development.

## SEARCH INTO PRACTICE

### CRITICAL CONCEPT 1

A theory of child development is a belief system about how and why children grow, learn, and behave as they do.

Theories are very practical: they can guide adults in making decisions about teaching and caring for children.

**Application** Clarify your own theories about children and how they develop. A clearly articulated theory leads to thoughtful and consistent parenting and teaching.

### CRITICAL CONCEPT 2

Four predominant theories of child development can be identified in the literature. All hold some value in resolving classroom dilemmas. Each provides useful guidance to parents and teachers.

**Application** Become familiar with alternative theories of child development. Borrow critical concepts and strategies from each theory in your professional practice.

### CRITICAL CONCEPT 3

The maturationist theory holds that most of what children become is inherited; behaviors and abilities simply unfold as children mature.

**Application #1** Recognize that some characteristics of children are genetically determined at birth. Appreciate and accept diverse interpersonal styles or temperaments that are part of children's biological heritage.

**Application #2** Adapt classrooms to meet the unique inborn traits of individual children rather than expect children to adapt to classrooms.

**CRITICAL CONCEPT 4**

Behaviorist theory holds that the child is a blank slate at birth and is simply filled in over time by experience. From this perspective, adults can use rewards, praise, modeling, and other tools to shape children's development in any desired direction.

**Application #1** Use positive feedback and other rewards to influence children's behavior.

**Application #2** Behave as you wish children to behave, thereby modeling desirable behavior. Children are more likely to do what adults do than what adults tell them to do.

**CRITICAL CONCEPT 5**

The psychoanalytic theory is concerned mainly with personality formation. Psychoanalysts characterize psychological growth as a process of resolving emotional conflicts between instinctual desires and the demands of the real world.

**Application #1** Be nurturing and responsive to the needs of infants and toddlers so that children of this age will acquire feelings of trust.

**Application #2** Encourage autonomy—an emotional state in which children strive to be independent and separate from parents. Allowing exploration and self-expression and avoiding punishment or overrestriction are ways to do this.

**Application #3** Promote a sense of initiative by encouraging children to assert themselves, make creative attempts, take risks, and reach out to peers.

**Application #4** Promote a sense of industry—a feeling of being competent—by providing many experiences with success both in and out of school.

**CRITICAL CONCEPT 6**

Cognitive-developmental and sociocultural theorists view mental growth and language as most critical; they view development as the active, internal construction of knowledge. These theories are often viewed as more culturally sensitive than other perspectives on child development.

**Application #1** Provide interesting experiences, ask questions, and pose challenges that lead young children to actively solve problems and construct their own understandings of the world.

**Application #2** Scaffold children's learning by asking questions, prompting, or giving hints when a child is within the zone of proximal development—that is, when the solution to a problem is just beyond the child's level of ability.

**CRITICAL CONCEPT 7**

The information processing theory describes how children use memory, attention, and other specific learning processes to learn in new situations. Social information processing theorists show how the theory is useful in helping children process and resolve social problems, using previously stored experiences to guide them.

**Application #1** Help children to become aware of and use attention and memory to solve problems by pointing out the things that are most important for them to attend to or remember.

**Application #2** Guide children in social situations by helping them pay attention to social cues—smiling, crying, shouting—of peers and to reflect on past experiences in resolving conflicts.

**CRITICAL CONCEPT 8**

Ecological systems theories hold that developmental processes do not occur in a psychological vacuum but rather that individual child development is influenced by factors in the immediate environment as well as society and culture as a whole. Ecological systems theories are thought to be most useful in defining social issues and guiding social policy decisions.

**Application #1** Realize that classroom intervention alone will not ensure positive child development. Family, community, and societal factors must also be optimal for children to learn and be healthy.

**Application #2** Help parents and families access community resources. They should become knowledgeable about and establish relationships with local service agencies and should ensure that parents have access to these agencies.

**Application #3** Expand your role as a professional to include advocacy. Lobby your local, state, and federal legislators; organize community or parent advocacy groups; and in other ways work to ensure a child-caring community and society.